

New Information on Produced Water Volumes and Management Practices

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Abstract

In 2009, Argonne National Laboratory published a report that estimated produced water volumes from all oil and gas wells in the United States during 2007 (21 billion bbl) and gave general trends on how the produced water was managed (nearly all onshore produced water is reinjected, and nearly all offshore produced water is treated and discharged). That report (Clark and Veil, 2009) has been cited thousands of times.

That information is now more than five years old. Since 2007, the U.S. oil and gas industry has changed dramatically with the rapid expansion of unconventional oil and gas production. Unconventional production was not a large percentage of total national production in 2007, whereas in 2012 unconventional production was considerably higher. The total volumes and changes over time in water production profiles are generally different for conventional wells and unconventional wells. Therefore, the data from 2012 may be different from data from 2007.

This presentation describes the approach used to collect data, the results of both the produced water generation volume estimate and how the produced water was managed in 2012, and the assumptions, caveats, estimation and extrapolation approaches used to fill gaps in the data.

Bio

John Veil is the President of Veil Environmental, LLC, which he founded upon his retirement from Argonne National Laboratory in 2011. Veil has published numerous reports on produced water and has lectured around the world on water and energy subjects. He holds degrees in Earth and Planetary Science, Zoology, and Civil Engineering. He is also an avid saltwater fisherman.